第23卷 第3期 昆虫学报 Vol. 23, No. 3
1980年8月 ACTA ENTOMOLOGICA SINICA Aug., 1980

柚木螟的分类及一新属

王平远 宋士美
(中国科学院动物研究所)

柚木 (*Tectona grandis* L.) 原产亚洲热带,是重要用材树种。有螟蛾科害虫柚木螟剥食叶肉,影响树木生长,在我国海南岛发生,为害严重。本种按 Hampson (1896) 分类系统鉴定为:*Pyrausta machaeralis* Walker. Hole (1904), Beeson (1918), Mackerizie (1921), Atkinson (1926), Kalshoven (1928) 先后都使用过这个学名。以后 Atkinson (1933) 改称 *Hapalia machaeralis* Walker. 近来 Misra (1975) 又用 *Pyrausta machaeralis* Walker. 在编写螟蛾科经济昆虫志的当时,我们鉴定采自我国海南岛的这种标本采用 Hampson 分类系统,从外部形态分析雄蛾中胸足胫节宽阔有栉毛很接近 *Pionea* 属。目前分析外生殖器形态分类进一步研究发现这种螟蛾与 *Pyrausta, Hapalia, Pionea* 的属模均有所不同,尤其外生殖器构造十分特殊,应该是独立的一个新类群。Hampson 分类系统的 *Pyrausta* 属原来是包含许多异质的复合体。当前许多原来属于该属的种类从外生殖器形态特征类型方面明显不同,先后均分别独立划分成新属。例如常见的玉米螟 *Pyrausta nubilalis* 现在隶于 *Ostrinia* 属。Forbes (1926) 指出 *Pyrausta* 属雄蛾分两个类群:一类有翅缰钩,一类无翅缰钩,模式种 *Pyrausta cingulata* (L.) 有翅缰钩。Munroe (1950) 研究北美的 *Pyrausta* 属无翅缰钩类群,把美洲该属划分为8个属,其中 *Hapalia* 属 (模式种 *Hapalia illibalis* Hübner) 已并入列为 *Palpita* 属(模式种 *Palpita unionalis* Hübner) 的异名。Hampson (1918) 把 *Pionea* 属改称 *Hapalia* Hübner 属(模式种: *Hapalia fulvalis* Hübner)。其后 Zimmerman (1958) 指出 *Hapalia* 与 *Pionea* 两个属显然不同,不应依照 Hampson 意见列成一个仍须分别作为两个属对待。由此可见分类上早已存在混乱状态。

现在我们研究分析:柚木螟的属级分类位置无论在 *Hapalia* 或 *Pyrausta* 属都是不合理的。按这种螟蛾雌雄前翅都有翅缰钩,外生殖器与 *Hapalia, Pyrausta, Pionea* 属所代表的类型皆无相同之处(见 Pierce, F. N. V. & Metcalf, J. W. (1938) pl. XIV—XV)。由于 Hampson 系统的 *Pyrausta* 属是包括不同种类的异质种群复合体,柚木螟外生殖器特征另代表一新类群,而与 *Pyrausta* 及 *Hapalia* 外生殖器构造毫无共同之处,现提出建立新属——柚木野螟属。

柚木野螟属* *Eutectona* 新属

模式种: *Pyrausta machaeralis* Walker

外部形态 (图1—8) 额扁平。有口喙。下颚须扩展鳞片三角形。下唇须斜伸、鳞片光滑,第二节比较厚,第三节短小细尖稍微裸出。触角丝状有细纤毛。雄蛾中胸足胫节显着宽阔粗壮,胫节内窝有簇生鳞毛,内距短小,第一跗节较长。前胸足及后胸足细长。雌蛾触角丝状,前胸足及后胸足各节细长,中胸足腿节和胫节粗壮。前胸跗节端距较长。腹部末端短粗稍尖。翅狭三角形,翅顶略圆,有翅缰钩。前翅 R_1 脉从中室上侧五分之一向外伸出,R_2 脉从中室上角伸出,R_{3+4} 脉共柄部分比分离部分长,R_5 脉从中室上角向外直伸,基部与 R_{3+4} 脉不接近。M_1 脉从中室角前方伸出,M_2、M_3 两脉从中室下角分离。Cu_1

本文于1978年7月收到。
海南岛热林站吴士雄同志供给标本,谨致谢意。
* 根据幼虫为害柚木,从寄主拉丁化取名。

脉从中室下角直接伸出，Cu_2 脉从中室五分之一的一侧伸出。臀套粗大。后翅 M_2、M_3 及 Cu_1 脉于基部接近。中室端脉弯曲。

雄蛾外生殖器(图 10, 11) 爪形突狭长、顶端尖锐密布下垂细刺。无颚形突。背兜狭窄、背面有两条硬骨化平行沟。基腹弧狭窄。阳茎端基环椭圆无裂片。抱器瓣硬骨化宽阔椭圆、末端圆弧形密生长毛。抱器背光滑，有一生满短硬刺骨化的指头状爪垫。抱器腹硬骨化光滑、密布短细刺毛。囊形突卵圆形，阳茎细长，阳茎端有多枚硬化粗钩状成排的硬刺。角状器硬刺多枚成束。

雌蛾外生殖器(图 9) 产卵器扁圆多短毛，交配孔宽阔漏斗形。囊导管弯曲。交配囊有皱褶，囊内有一枚大菱形坚硬具横纹两侧及两端均尖锐细长的交配囊片。交配囊开口处又有一硬化密布硬棘和刺钩的副囊片。

本属特点与 *Pyrausta* 及 *Hapalia* 属的区别是：雄蛾外生殖器爪形突狭长顶端尖锐，抱器瓣爪垫只有短刺无长毛，抱器腹光滑无刺钩，阳茎角状器硬刺排成两行。雌蛾外生殖器交配囊内有硬骨化带刺钩的副囊片。

生活习性 据热林站吴士雄同志报道：在海南岛尖峰岭以幼虫为害柚木叶，剥食叶绿素软组织，留下网状叶脉和维管束。取食之际同时在叶片上吐丝结薄网并咬穿螺栓形小孔，便于受惊后穿过逃逸。终年为害无冬眠。取食植物除柚木以外，还有大叶紫珠 (*Callicarpa macrophylla* Vahl.)，裸花紫珠 (*C. nudiflora* Hook et Am.)，白毛紫珠 (*C. cana* Linn.)。

分布 广东(海南岛)，台湾；印度，斯里兰卡，缅甸，印度尼西亚，马来亚，澳大利亚。

ON TAXONOMIC STATUS OF THE TEAK LEAF SKELETONIZER, *PYRAUSTA MACHAERALIS* WALKER, WITH ESTABLISHMENT OF A NEW GENUS

WANG PING-YUAN & SUNG SHIH-MEI
(Institute of Zoology, Academia Sinica)

The teak leaf skeletonizer (*Pyrausta machaeralis* Walker) has long been known as a serious pest of teak (*Tectona grandis* L.) in tropical Asia. Recent identification of this insect collected from Hainan, Kwangtung, showed that the taxonomic position concerning this species is in chaos. It is different both structurally and morphologically from *Pyrausta, Pionea* and *Hapalia* as referred in literature. The genera *Pyrausta* and *Palpita* of Hampson's are very unnatural and the genus *Pyrausta* is a heterogenous group. We are of the opinion to establish a new genus for this species.

*Eutectona** Gn. Nov.

Type species: *Pyrausta machaeralis* Walker

External characters: Frons flatten. Maxillary palpi expanded triangularly scaled. Labial palpus porrect smoothly scaled, second joint thick, obliquely ascending, third joint small pointed covered with scales. Antennae smoothly ciliated. Abdomen of male slender, abdominal tip pointed. Mid tibia of male long and robust, inner cavity with tufts of hairy scales, inner spur of 1st tarsal segment and femur short. Abdomen of

* From the host plant of this insect.

female blunt, abdominal tip also blunt. Mid tibiae comparatively short, without tufts of hairy scales. Inner spur of 1st tarsal segment and femur longer. Wings triangular with rounded tips, frenulum hook present. Wing venation normal. In fore wing R_1 arising at middle of cell, R_2 at upper angle of cell. Stalk of R_{3-4} shorter than free portions of veins, R_5 straight not approximated to R_{3-4} at base. M_1 from before angle of cell. M_2, M_3 and Cu_1 not approximated to one another at base. Cu arising at lower angle of cell. Cu_2 arising from one-fourth of cell. Anal loop large and strong. In hind-wing, M_2, M_3 and Cu_1 approximated at base, discocellular curved. Wing expanse male 22 mm. female 24 mm.

Male genitalia: Uncus long and narrow, tip tapering, strongly spinose. Gnathos absent. Tegumen narrow, dorsum of which with two straight longitudinal chitinized grooves. Anal tube long and extended. Vinculum narrow. Juxta oval without lobe. Valva clothed with hairs heavily sclerotized. Costa smooth. Pad finger shaped spinous. Sacculus strongly sclerotized, smoothly clothed with short spinose hairs. Saccus oval. Aedeagus long and slender, fesica with rows of sclerotized spine. Cornuti with bundles of slender barbs.

Female genitalia Ovipositor hairy. Ostium wide, funnelshaped. Ductus bursae convoluted. Bursa copularix rhomboidal in shape with grooves, near the origin of which armed with sclerotized thorny sharp pointed acessory signum. Signum large rhombic in shape occupying most part of the copulatory bursae.

参 考 文 献

Atkinson. D. J. 1926 Some type of teak defoliation. *Indian Forester* 52(4): 141—5.

———— 1933 Entomological Research. *Rep. Silv. Ent.* Burma 1932—3.

Beeson, C. F. C. 1918 Forest Insect Condition in India. *Agric. J. India* pp. 114—24.

Forbes, W. T. H. 1926 The relationships of some aberrant Pyralids (Lep.). *Jour. New York Ent. Soc.* **34**: 331—6.

Hampson, G. F. 1896 Fauna of British India vol. 4.

———— 1918 Descriptions of New Pyralidae of the subfamily Pyraustinae. *Ann. Mag. Nat. Hist. Soc.*, (9 ser.) **2**(11): 393—407.

Hole, R. S. 1904 Two notorious pests. *J. Bombay Nat. Hist. Soc.*, **15**: 679—97.

Kolshoven, L. G. E. 1928 De beschadigingen ziekten en plagen van de djatibosschen op Java. *Tectona* **21**: 593—623.

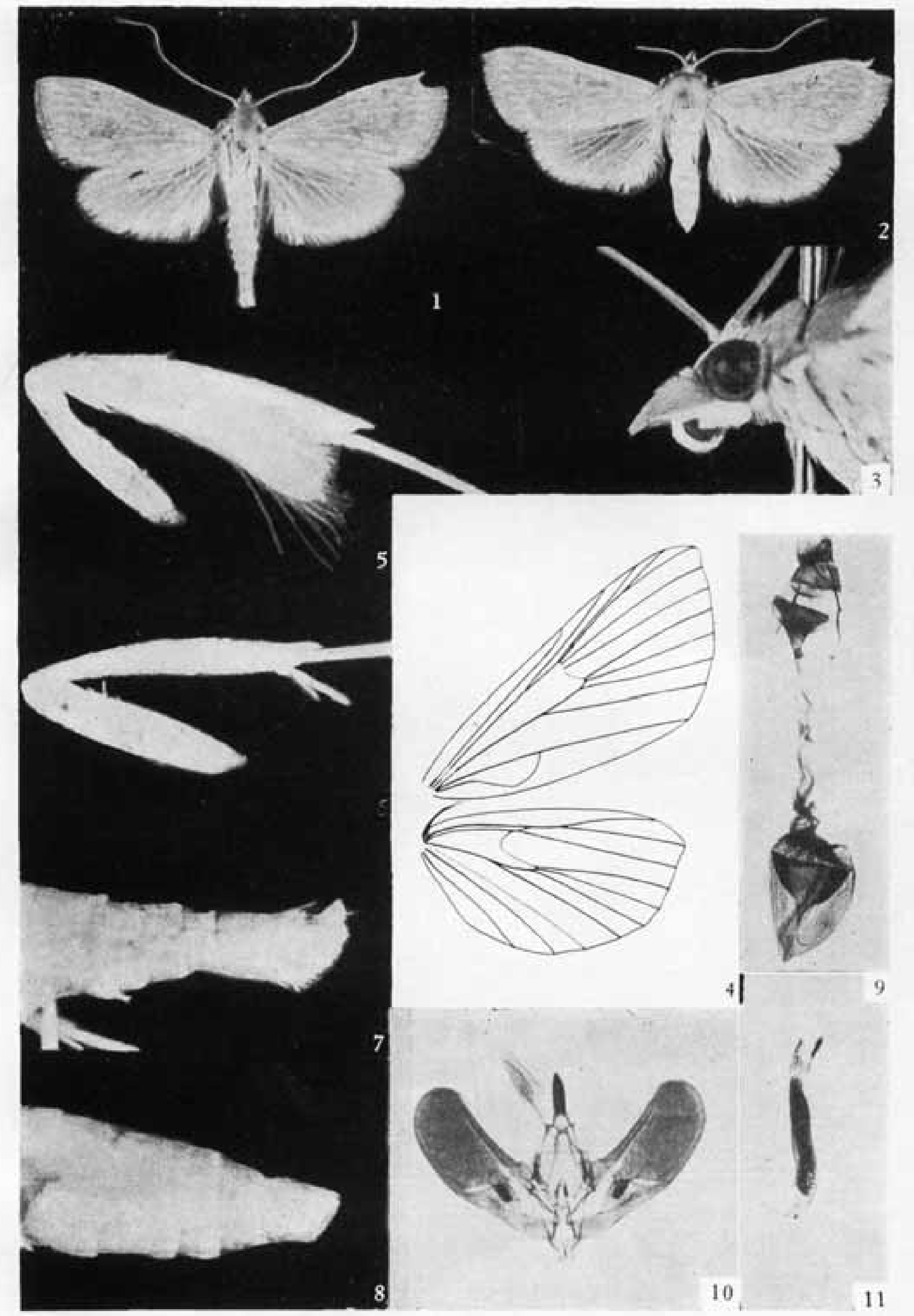
Mackerizie, J. M. D. 1921 Some notes on forest insect pests in Burma. *Indian Forester*. **47**(8): 309—10.

Misra. M. P. 1975 Sexing pupae and adult moths of teak skeletonizer *Pyrausta machaeralis* Walker (Lepidoptera: Pyralidae) *Indian Forester*. **101**(5): 301—4.

Munroe, E. 1950 The Generic position of some North American Species commonly referred to *Pyrausta* Schrank (Lepidoptera: Pyralidae) *Can. Ent.* **82**(11): 217—31.

Pierce, F. N. & J. W. Metcalfe 1938 The genitalia of the British Pyrales with the deltoids and plumes.

Zimmerman, E. C. 1958 Insects of Hawaii vol. 8. Lepidoptera Pyraloidea.



1.雄蛾（×3.3）　2.雌蛾（×3.3）　3.头部侧面观　4.翅脉脉序　5.雄蛾中胸足
6.雄蛾后胸足　7.雄蛾腹部后端侧面观　8.雌蛾腹部后端侧面观　9.雌蛾外生殖器
10.雄蛾外生殖器　11.雄蛾阳茎。